

Amendments to the Specification

Please replace the paragraph beginning at page 5, line 28, with the following amended paragraph.

BRIEF DESCRIPTION OF THE DRAWINGS

[[Fig.]] FIG. 1 is an example of a dental article form 10 according to the present invention.

FIG. 2 is a view of the labial surface of one dental crown form according to the present invention including a handle.

FIG. 3 is a cross-sectional view of the dental crown form of FIG. 2 taken along line 3-3 in FIG. 2.

FIG. 4 is a cross-sectional view of the dental crown form of FIG. 3 after placement on a prepared tooth.

FIG. 5 is a view of an interproximal surface of another dental crown form according to the present invention illustrating a line of weakness formed therein.

Please insert the following new paragraphs (in the order presented below) at page 16, line 3 (immediately before the heading "EXAMPLE"):

FIG. 1 is an example of one dental article form according to the present invention.

FIG. 2 is a view of another dental crown form, FIG. 3 is a cross-sectional view of the same dental crown form, and FIG. 4 is a cross-sectional view of the same dental crown form fitted over a prepared tooth. The dental crown form 110 includes a body 112 defining a tooth-shaped volume in its interior that is generally in the shape of the tooth to be restored. Because healthy teeth are found in a variety of anatomical shapes, the body 112 and its tooth-shaped volume may take a variety of anatomical shapes that correspond to those of healthy teeth. As such, those of skill in the art will recognize that the precise shape of the dental crown form 110

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and its tooth-shaped volume will vary depending on the anatomical shape of the tooth to be repaired.

The body 112 includes a base 114 defining an opening through which a tooth to be restored is inserted. In anatomical terms, the base 114 can be correlated to the cervical/gingival region of an actual tooth. The dental crown form 110 also includes an incisal/occlusal region 116 located opposite the base 114.

The body 112 of the dental crown form 110 can be manufactured of any suitable material or materials that are structurally capable of maintaining the desired shape of a tooth. Examples of some suitable materials for the dental crown forms of the present invention include, but are not limited to polyacrylonitriles, polyesters, polyamides, polyureas, polyolefins, polystyrenes, etc.

The dental crown form 110 also includes a handle 120 extending from the body 112. It may be preferred that the handle 120 be attached to the body 112 at a location removed from the base 114. By "removed from the base" it is meant that the handle is attached to the body at a location that is not at the base 114, but is, rather, spaced from the base 114 by at least some distance. In the depicted embodiment, the handle 120 extends from the labial surface of the dental crown form 110 (slightly below the incisal/occlusal region 116). Alternatively, the handle 120 may extend directly from the incisal/occlusal region 116 or from the lingual surface or one of the interproximal side surfaces of the dental crown form 110. It may, however, be preferred that the handle 120 be attached to the body 112 on a labial or lingual surface as opposed to an interproximal side surface to facilitate manipulation and placement of the dental crown form 110 between neighboring teeth.

By providing a handle 120 that is attached to the dental crown form 110 at a location removed from the base 114, manipulation of the dental crown form 110 within the mouth of a patient during placement of the dental crown form 110 may be enhanced. It may be preferred that the handle 120 be attached to the dental crown form 110 at a location that is closer to the incisal/occlusal region 116 than the base 114. Referring to FIG. 3 in particular, the dental crown form 110 may be characterized as having an overall height h measured from the base 114 to the

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furthest point in the incisal/occlusal region 116. It may be preferred that the handle 120 be attached to the body 112 of the dental crown form 110 within a handle region h' (see FIG. 3) that is defined as the outer surface of the dental crown form 110 within a distance $h/2$ from the furthest point in the incisal/occlusal region 116. It may be more preferred that the handle region h' be defined as the outer surface of the dental crown form 110 within a distance $h/3$ from the furthest point in the incisal/occlusal region 116.

The handle 120 includes a tip 122 located distal from the body 112. The handle 120 may preferably be hollow, i.e., have a handle volume that is in fluid communication with the tooth-shaped volume of the body 112 through a vent opening 121 formed in the body 112. If hollow, the handle 120 may have a hollow tubular shape with any suitable cross-section, e.g., circular, oval, triangular, rectangular, etc.

If the handle 120 is hollow (as seen in FIG. 3) and fluid communication between the tooth-shaped volume of the body 112 and the handle volume of the handle 120 is desired, then a vent opening will need to be formed in the body 112 to provide that desired fluid communication.

As an alternative to a hollow handle 120 in fluid communication with the tooth-shaped volume of the body 112, the body 112 may include one or more vents formed therein through which excess hardenable dental material 130 may pass when placing the filled dental crown form 110 on a prepared tooth 140 (as seen in FIG. 4). Such vents may be provided in the dental crown form 110 as packaged when provided to the practitioner or they may added by the practitioner after removing the dental crown form from the package (as described in, e.g., U.S. Patent 5,951,294 to Pierson).

If the handle 120 is hollow, the tip 122 may preferably be sealed as depicted in FIGS. 2 and 3. When sealed, the handle volume is preferably not in fluid communication with the ambient air surrounding the tip 122. The sealing may be performed by any suitable technique or techniques. In the depicted embodiment, the tip 122 is molded closed during manufacturing. Other examples of sealing techniques may include, e.g., heat sealing, providing a plug within the

handle, providing a cap over the exterior of the tip, etc. It may be preferred that some indicia be provided on the handle 120 or attached thereto to identify, e.g., the dental crown form itself and/or the dental restorative material located therein (if any).

FIG. 4 is a cross-sectional view of the dental crown form 110 of FIGS. 2 and 3 in place over a prepared tooth 140. The prepared tooth 140 may be prepared such that an appropriate bond is formed between the hardenable dental material 130 and the prepared tooth 140. Such preparation may include, e.g., shaping, etching, priming, coating with a dental adhesive, etc.

A portion of the mass of hardenable dental material 130 in the dental crown form 110 is displaced by the prepared tooth 140 as the dental crown form 110 is moved into position. The amount of hardenable dental material 130 displaced by the prepared tooth may preferably exit from within the body 112 of the dental crown form 110 into the volume of the handle 120 through vent opening 121. To facilitate movement of the hardenable dental material 130 into the handle 120, the handle 120 may preferably be vented to the ambient atmosphere.

If the tip 122 of the handle 120 is sealed as depicted in FIGS. 2 and 3, the venting may involve removal of the tip 122 by, e.g., cutting the tip 122 with a scissors, knife, or other instrument. If the tip 122 is sealed by other techniques, then actions appropriate for that sealing technique may be employed (e.g., removal of a plug or cap from the tip, etc.).

FIG. 4 is a side view of an interproximal side surface of another dental crown form 110 according to the present invention. The dental crown form 110 includes a body 112 that defines an interior tooth-shaped volume, along with a base 114 and an incisal/occlusal region 116 similar to those discussed above. The tooth-shaped volume of the body 112 may contain hardenable dental material as packaged and provided to the practitioner.

If the handle 120 is hollow, it may include a plug 128 of, e.g., material that is capable of restricting flow of the hardenable dental material 130 through the handle 120. A plug 128 may be provided in addition to a sealed tip 122 or in place of the sealed tip 122. Examples of some suitable materials for the plug 128 may be sorbent material designed to absorb dental materials as described in, e.g., U.S. Patent 5,707,236 (Swanson et al.).

FIG. 5 is a side view of an interproximal side surface of another dental crown form 210 according to the present invention. The dental crown form 210 includes a body 212 that defines an interior tooth-shaped volume, along with a base 214 and an incisal/occlusal region 216 similar to those discussed above. The tooth-shaped volume of the body 212 may contain hardenable dental material as packaged and provided to the practitioner.

The dental crown form 210 also includes at least one line of weakness 240 formed in the body 212. Although only one line of weakness 240 is depicted in FIG. 5, a second line of weakness may preferably be provided on the opposite interproximal side surface of the dental crown form 210.

The lines of weakness 240 preferably define lines along which the body 212 may preferably separate when tension is applied across the line of weakness 240. The lines of weakness 240 may take a variety of forms, e.g., thinned lines in which the wall thickness of the body is reduced relative to the surrounding wall thickness, score lines formed after the dental crown form 210 is manufactured, lines of perforations, etc. In yet another variation, the line of weakness may be defined by a filament molded in the body 212 such that the body preferentially separates along the filament. Other variations providing a means of separation may be envisioned by those skilled in the art.

Separation of the body 212 along the one or more lines of weakness 240 may be facilitated by a variety of optional features. For example, notches 242 may be provided at the ends of the lines of weakness 240. The notches 242 may act as stress concentrators to initiate separation along the lines of weakness 240.

The dental crown form 210 may also include tabs 250. The tabs 250 may be used to both facilitate manipulation of the dental crown form during placement on a prepared tooth and to provide a location at which the dental crown form may be gripped to apply the force required to separate the one or more lines of weakness in the body 212. As such, it may be preferred to provide two or more tabs 250 on opposite sides of the base 214 of the body 212 as depicted in FIG. 5. The tabs 250 may alternatively be located at a position removed from the base 214.

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Some indicia may be included on the tabs 250 or attached thereto to identify, e.g., the dental crown form itself and/or the hardenable dental material located therein (if any).